#36
10-3-03
DJR

Docket:
87583.025901

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Applicant:	Gustavo R. Paz-Pujalt, et al.	)	Examiner: M. Grendzynski
Serial No.:	09/131,710	)	
Filed:	August 10, 1998	)	Art Unit: 1774
For:	RECEIVER HAVING HYDROPHILIC RECEIVING SURFACE	)	

AMENDMENT

Commissioner of Patents and Trademarks
P O Box 1450
Alexandria, VA 22313-1450

REMARKS

These remarks respond to the office action mailed on May 20, 2003. Claims 14, 17, and 18 are pending in the application. Those claims were rejected under 35 U.S.C. 112, first paragraph as failing to comply with the enablement requirement.

The rejection states that the subject matter of the claims was not described in the specifications in such a way as would enable one skilled in the art to make or use the invention. Specifically, the Examiner contends that the phrases "barrier layer" and "ink-receiving layer" [sic, "image-receiving layer"] are too broad and provide no direction regarding their composition or properties.

The rejection is clearly erroneous. It fails to state a prima facie case of lack of enablement and, even if it did, the evidence presented with this response overcomes the objections identified in the office action.

Claim 14 includes a clear layer over an information-receiving layer of an image-receiving structure. The image- receiving structure has a support, a barrier

layer and an information-receiving layer. An example of the invention is found in Figs. 7 and 8. A clear layer covers an image receiving structure that includes information-receiving layer 60, a barrier layer 58 and support 56. The three layers in the image-receiving structure are well known and are conventional layers used in many thermal dye transfer receiver sheets. The invention adds the further clear layer on top of well-known sublayers.

The rejection criticizes the specification for not disclosing the composition or properties of the barrier and the information-receiving layers. But any lack of disclosure of a composition is irrelevant because Applicants are not claiming a particular composition for either layer. The allegation that the specification does not disclose the properties of the barrier and image-receiving layer is erroneous as will be shown below.

The specification discloses using dyes or inks to form images. Page 4, lines 3-10. It further discloses using an image receiving layer that receives the dye as the colorant. ("[C]olorant donor element 14 . . . typically employs a . . . dye." Page 4, line 5, 6.) The specification discloses a barrier layer beneath the image-receiving layer for barring passage of dyes ("When the dye is the colorant a barrier layer 58 is provided . . . ." Page 4, line 17-18). There is no question that the specification discloses using a receiving layer that receives dye colorants and, when dye is used, a barrier layer that prevents the dye from penetrating into the substrate. Indeed, those properties are conventional common to any practical dye colorant receiver sheet.

As such, the rejection fails to show a prima facie case of lack of enablement because the composition of the barrier and information-receiving layers is not, per se, part of the claims and because the specification clearly shows the properties of those layers.

In addition, there is ample evidence that those skilled in the art understand how to make barrier and information-receiving layers. For example, see U. S. Patent No. 5,053,381 issued 1991. It is assigned to the same assignee as the subject application. The '381 patent states in pertinent part:

> The intermediate or first **dye-receiving** element that is used in the process of the invention comprises a support having thereon a dye image-receiving layer. The support may be a polymeric film such as a poly (ether sulfone), a polyimide, a cellulose ester such as cellulose acetate, a poly (vinyl alcohol-co-acetal) or a poly (ethylene terephthalate). The intermediate support thickness is not critical, but should provide adequate dimensional stability. In general, polymeric film supports of from 5 to 500 .mu.m are used. The intermediate dye-receiving element support may be clear, opaque, and/or diffusely or specularly reflective. Opaque (e.g. resin coated paper) and reflective (e.g. metal coated polymeric film) supports are preferred when a laser system is used to form the dye image in the dye image-receiving layer, and such supports are the subject matter of copending, commonly assigned U.S. Ser. 07/606,404 of Kaszczuk et al., the disclosure of which is incorporated by reference.
>
> The **dye image-receiving layer** may comprise, for example, a polycarbonate, a polyurethane, a polyester, polyvinyl chloride, cellulose esters such as cellulose acetate butyrate or cellulose acetate propionate, poly(styrene-co-acrylonitrile), poly(caprolactone), polyvinyl acetals such as poly(vinyl alcohol-co-butyral), mixtures thereof, or any other conventional polymeric dye-receiver material provided it will adhere to the second receiver. The dye image-receiving layer may be present in any amount which is effective for the intended purpose. In general, good results have been obtained at a concentration of from about 0.2 to about 5 g/m.sup.2.
>
> Col. 4, lines 3-33.
> * * * *
> As noted above, after the dye image is obtained on a first dye-receiving element, it is retransferred to a second or final receiving element in order to obtain a final color proof. The final receiving element comprises a paper substrate to which has been applied a dye-migration barrier layer. The substrate thickness is not critical and may be chosen to best approximate the prints to be obtained in the actual printing press run. Examples of substrates which

may be used for the final receiving element (color proof) include the following: Adproof.RTM. (Appleton Paper), Flo Kote Cove.RTM. (S. D. Warren Co.), Champion Textweb.RTM. (Champion Paper Co.), Quintessence Gloss.RTM. (Potlatch Inc.), Vintage Gloss.RTM. (Potlatch Inc.), Khrome Kote.RTM. (Champion Paper Co.), Consolith Gloss.RTM. (Consolidated Papers Co.) and Mountie Matte.RTM. (Potlatch Inc.).

The **dye-migration barrier layer** may be any material which limits the tendency of the transferred halftone dye image dots from spreading due to migrating into the paper substrate. Materials generally useful are those used as polymeric binders in the dye layer of the dye-donor element described above and polymers used for the dye image-receiving layer of the intermediate dye-receiving element. The dye-migration barrier layer is preferably thin so as to not affect the appearance of the final color image, while still thick enough to provide adequate protection against migration of the dye image into the paper substrate. In general, coverages of from 0.1 to 5 g/m.sup.2 are preferred for polymeric dye-migration barrier layers.

The **dye-migration barrier layer** may be applied to the paper substrate by any conventional method such as extrusion coating, solvent coating, or lamination. In a preferred embodiment, the dye-migration barrier layer is a polymeric layer preformed on a support, which is then laminated to the paper substrate. The support can then be separated from the dye-migration barrier layer. This layer application can be accomplished, for example, by passing the paper substrate and the polymeric dye-migration barrier layer with support between a pair of heated rollers to form a laminate, and then stripping the support away. Other methods of transferring the dye-migration barrier layer from its support to the final receiver substrate could also be used such as using a heated platen, using a resistive thermal head, other conventional use of pressure and/or heat, external heating, etc. To facilitate separation, release agents may be included within or between the dye-migration barrier layer and its support. For example, conventional silicone based materials or hydrophilic cellulosic materials may be used. Useful supports for the dye-migration barrier layer include those listed above for the intermediate dye-receiving element.

Col. 5, line 32- col. 4, line16.

The above reference is typical of many others found in this field. For further examples of receiver sheets see U. S. Pat. Nos. 5,733,845; 5,756,188 and 5,789,340. For even more examples of receiver sheets, see all of class 503. For other examples of dye barriers on receiver sheets see U.S. Patent Numbers 5,342,821 and 5,275,912.

Applicants also contend that *In re Wright*, 99 F.2d 1557, 27 USPQ2d 1510 (Fed. Cir. 1993) does not apply because the facts of this application are very different from those of Wright's application. His invention dealt with biological systems in which the minor variations in processes can yield unpredictable results. In contrast, Applicants' invention deals with a combination of known barrier and information-receivers. The elements of the invention are thus more mechanical in nature than they are chemical or biological and combinations of mechanical elements (layers) yields consistent predictable results with little or no experimentation required.

In view of the foregoing, Applicants believe that their invention is enabled. Accordingly, this application is believed to be in a condition for allowance, the notice of which is respectfully requested.

Respectfully submitted,

Thomas R. FitzGerald
Reg. No. 26,730

Thomas R. FitzGerald, Esq.
16 East Main Street, Suite 210
Rochester, New York 14614-1803
Telephone: (585) 454-2250
Fax: (585) 454-6364